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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,240	12/31/2003	Ryoichi Aoyama	OKI 395	6971
23995	7590	01/05/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005			NGUYEN, HUNG	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,240

Applicant(s)

AOYAMA ET AL.

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the statement of “claims 1-3 of the present invention each provide” (see page 3, line 24) or “claims 4-6 of the present invention each provide” (see page 4, line 13) or “claims 7-10 of the present invention each provide” or “according to claim 8 of the present invention” (see page 20, line 5) etc... should be omitted because the claims could be amended or deleted in the future and that could lead to an inconsistency between the specification and the claims of the instant application.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4-5, 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al (U.S.Pat. 6,268,904).

With respect to claim 7, Mori et al (figures 7-9) discloses a self-cleaning transmittable plate (72) in a semiconductor exposure apparatus (see figure 7) comprising all of the structures set forth in the instant claim such as: a light source for emitting ultraviolet light for exposure (see col.33, lines 28-29); an optical system (11-19) for guiding ultraviolet light emitted from the light source to an exposure mask (20) on which a predetermined exposure pattern is formed, and

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a projection lens (21) for projecting the pattern formed on the mask onto a substrate (22), the self-cleaning transmittable plate is arranged at a position where the exposure mask (20) is to be disposed (see col.10, lines 60-64) to clean the projection lens (21) with the ultraviolet light, the self-cleaning transmittable plate (72) diffusing or converging ultraviolet light guided by the optical system (11-19) to irradiate the projection lens 921) with the ultraviolet light.

As to claim 8, Mori further discloses the self-cleaning transmittable plate being made of a quartz glass plate “having a lens –shaped concave or convex portion on a surface thereof or convex portion on a surface thereof or a quartz glass plate having bracelet-shaped concave or convex lenses concentrically arranged on the surface” (see col.10, lines 64-67; see figure 16, element 212, 216).

With respect to claims 1-2, 4-5, the method claims are seen to be inherent teachings in existence of the above apparatus.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al (U.S.Pat. 6,268,904).

With respect to claims 3, 6 and 9-10, Mori et al discloses a self-cleaning device and corresponding method, and comprising substantially all of the limitations of the claims as

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discussed except for the specified shape of the self-cleaning transmittable plate, as recited in the instant claims. However, Mori does suggest that “diffusion plate 72 may be, for example, a fused quartz or calcium fluoride plate having a pattern etched in on one of its surface, such as surface 72s. The pattern on surface 72s may be periodic, such as diffraction grating, to diffract light incident thereon or may be random to scatter light incident thereon” (see col.10, lines 64 thru col.11, line 4). Furthermore, Mori suggests, “the present invention is constituted so that the lens surfaces of the projection lens 21 in the region greater than angle α and less than angle β are photo-cleaned by refracting light beam 222 by a photo cleaning optical member (for example, a convex lens or concave lens and the like” (see col.23, lines 66 thru col.24, line 4). This provides a clear evidence that it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the shape of the self-cleaning transmittable plate as specified in the instant claims of the present invention so that the entire lens surface and the inner side of the projection optical system can be efficiently cleaned.

Prior Art Made of Record

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

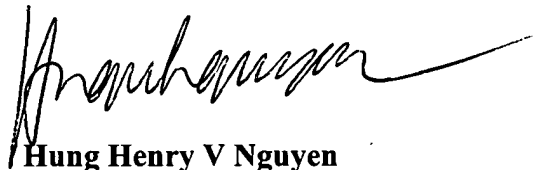
Matsumoto (U.S.Pat. 6,411,368) discloses an exposure apparatus having optical cleaning system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Hung Henry V Nguyen', with a long horizontal flourish extending to the right.

Hung Henry V Nguyen
Primary Examiner
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hvn
1/3/04